Claims

1. A flame retardant epoxy resin composition containing no more than 10 percent by weight of halogen, comprising

a) an epoxy resin,

b) a phosphonic acid ester in an amount such as to provide from 0.2 to 5 weight percent phosphorus in the composition,

c) a nitrogen-containing crosslinking agent having an amine functionality of at least 2, in an amount of from 10 to 80 percent of the stoichiometric amount needed to cure the epoxy resin,

d) from 0.1 to 3 weight percent of a catalyst capable of promoting the reaction of the phosphonic acid ester with the epoxy resin and promoting the curing of the epoxy resin with the crosslinker and, optionally

e) a Lewis acid in an amount of up to 2 moles per mole of catalyst.

2. A composition as claimed in Claim 1, wherein the epoxy resin has a softening point at least 50 degrees C (by ASTM D3104).

3. A composition as claimed in Claim 1 or Claim 2, wherein the epoxy resin contains not more than 2 alkyl groups per molecule.

4. A composition as claimed in Claim 3, wherein the epoxy resin contains not more than 1 alkyl group per molecule.

5. A composition as claimed in any one of the preceding Claims, wherein the epoxy resin is the reaction product [or a mixture] of a monomer containing at least two epoxy groups, and a difunctional chain-extending monomer, or wherein the composition additionally comprises a difunctional chain-extending monomer.

6. A composition as claimed in Claim 5, wherein the difunctional chain-extending monomer is -methylene bis(phenylisocyanate) (MDI), Toluenediisocyanate (TDI), 2,6,dimethylhexylamine, sulfanilamide or anthranilamide.